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The New Engineering Building

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THE NEW ENGINEERING BUILDING.

By William G. Raymond.

In The Transit of 1905 appeared a description of the proposed new engineering quadrangle of the State University of Iowa. Since then the first section of the quadrangle, perhaps one-sixth of the contemplated whole, has been built and occupied. This section, designed to accommodate 130 students, was known to be too small when it was begun, but the money available limited the structure to its present dimensions. As was stated in the previous article, the building is designed to be built in sections, and the next section, though much smaller than the one now built, will duplicate the study and drawing room space, and hence will provide accommodation for double the number of students.

The portion completed contains six rooms for study, drawing and recitation; one room for recitation or lecture only; one room intended for similar use, but used temporarily for the library and desk and recitation room for the senior class; a janitor's room; an executive office and faculty room; eight instructors' offices; toilet rooms; and a basement fan room.

The exterior of the building is Bedford limestone; the interior is in general of pressed brick, the walls of the corridors and some of the offices being plastered. The long corridors between the recitation rooms are well lighted during the day through glass sash, which constitutes the upper portion of the partition walls. The woodwork is oak finished in dark green Flemish style, and the furniture, so far as possible, is early English oak, the whole with the brick or tinted walls giving an effect of harmony quite generally pleasing.

The floors are of cement throughout the building, the base-boards in the plastered rooms and corridors being a combination marbolithic construction; the walls and partitions of the toilet rooms are pink Tennessee marble, and the stairways are of iron with non-slipping, composition treads.

Except the roof, which is wood covered with red tile, the entire

building is fire proof; and since the ceiling under the roof is of the same concrete steel construction as the floors—made so with a view of some time adding a story—little is to be feared from fire.

The heating is by a combination of direct and indirect steam radiation, warm, tempered, or cold air being forced over the building by blowers installed by the Buffalo Forge Company. No system of automatic regulation has been placed, but such a system may be put in.

The lighting is by electricity, incandescent clusters in the main offices and lecture rooms, and arc lamps in the drawing-study-recitation rooms. A good many tests have been made to determine the best method of lighting; various reflectors and lamps have been tried, and further experiments are yet to be made before the most satisfactory light will be determined.

One of the chief features of the building is the furnishing, which gives each student a study desk and drawing table in a room in which, so far as possible, all his work is done. There is a recitation space with blackboards at one end of the room designed to comfortably accommodate twenty-two men, this being the largest number deemed wise to include in one section. Chairs are provided for the recitation hour. For chemistry, physics, and the like, the student must go to the laboratory, but for all work requiring no laboratory demonstration, he may remain in the one room, and, during such periods as are not occupied by recitation or laboratory practice, he may study at his desk. This feature has been much appreciated by many students. The building is open from a little after seven in the morning until ten o'clock at night, and there is scarcely an hour between these limits when there are not a number of men at work at desk or drawing table.

Some little difficulty was feared in the matter of arranging sections of students so as to have the same men always in the same room, but it has been found that with a little care sections can be satisfactorily arranged. There is an occasional case when a student who is self-supporting finds it necessary to do some work with one section and some with another, but no serious inconvenience has as yet arisen with a freshman class of three sections and a sophomore class of two sections.

On Plate I are shown the exterior of the portion of the building now finished and the interior of the Faculty room and Dean's

office. On Plate II are shown the senior room and one of the sophomore study-drawing-recitation rooms. The study desks do not appear in the cut, but between each drawing table and the wall is a substantial office desk used by the one student only who uses the adjacent drawing table. The students in this room should be facing the other way for the best light. The sash on the left show the manner of lighting the corridor.

The arrangement of the rooms will lend itself well to the experiment that is to be tried with the incoming class. One section of this class is to be started working as individuals, each being permitted to advance as rapidly as possible and to complete his course in such time as he may find necessary. It is confidently expected that a number of the men in this section will complete the work in three years, showing great economy of time. It is also confidently expected that some men who would otherwise fail will be carried successfully through the course.

The result of this experiment will be watched with much interest, not only here in Iowa, but all over the country, since it surely means if successful a remodeling of our present methods of teaching.

During the present summer the first of the laboratories planned for the space surrounded by the main building is to be erected. This will be a steam laboratory 40 feet by 80 feet, built of brick, with saw-tooth roof construction. The plans for this structure are under way at the time of this writing.

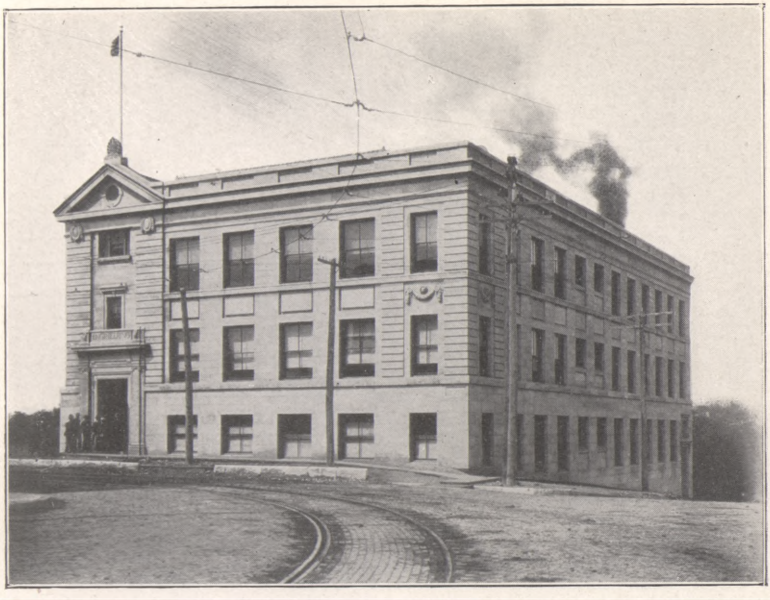

Fig. 1

Fig. 2

Plate I

FIG. 1

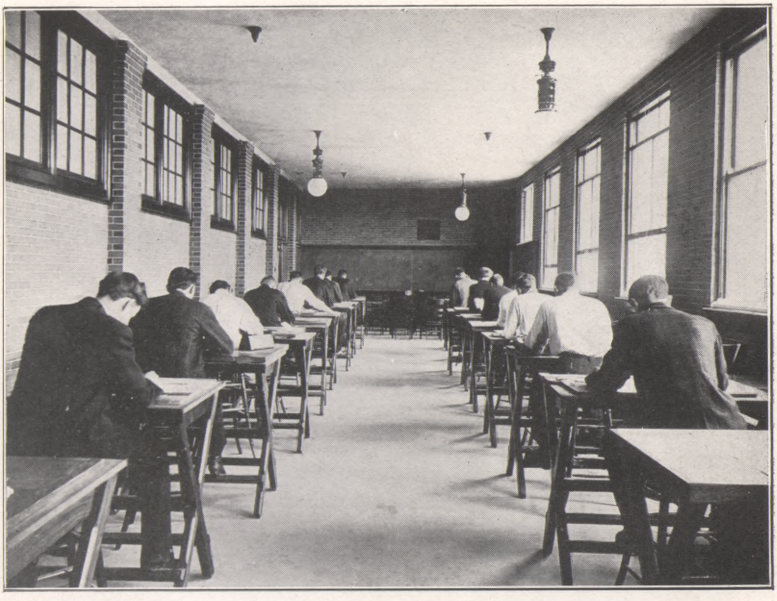

FIG. 2

PLATE II